

REMARKS

By this amendment, claims 1, 11, 14, 15, and 19 have been amended. Claims 1-15 and 18-19 are currently under examination in the present application. These amendments are presented so to reduce the issues in this application and place the application in condition for allowance, and thus entrance of the amendment is appropriate. For the reasons set forth below, Applicants submit that the present amendments and arguments will overcome all prior issues. Entrance of the present amendment is thus proper and will place this application in condition for immediate allowance.

Rejections under 35 U.S.C 112, second paragraph

As an initial matter, in the Office Action of July 2, 2008, the Examiner rejected claims 1-15, 18, and 19 under 35 U.S.C. §112, second paragraph as being indefinite. In particular, the Examiner asserted that claim 1 is indefinite with regard to the recitation “and the at least one secondary analyte is bound to each of the secondary support” because it is unclear how a single “at least one” analyte can be physically bound to each individual secondary support. Further, the Examiner asserted that claims 10, 11, and 14 were ambiguous. For the reasons set forth below, these rejections, insofar as applied to the claims as amended, are respectfully traversed and should be withdrawn.

With regard to the rejection of claim 1 as being indefinite, by virtue of the present amendments, claim 1 has been amended to clarify that (i) there are a plurality of primary analytes bound to respective primary supports, and a plurality of secondary analytes bound to respective secondary supports, and (ii) that the identification means allows

identification of the bound analytes as well as the supports. In this regard, it is noted that by the present amendments, claim 15 has also been amended to be consistent with claim 1. Support for these amendments can be found, for example, in the system shown in Figure 3 and described on page 12, line 3 to page 14, line 2 of the present application. Accordingly, no new subject matter has been added by amendments and the amendments should be entered.

With regard to the rejections of claims 10 and 11 as being ambiguous, the Examiner has asserted that claim 10 is ambiguous in relation to claims 9 and 19 and that claim 11 is ambiguous in relation to claims 9 and 19. However, despite the Examiner's assertions that the claims are ambiguous in relation to the other claims, Applicants respectfully submit that claims 10 and 11 are not ambiguous. In particular, it is noted that claim 10 does not depend from claim 9 or 19, and, therefore, the radio frequency identification transponder included in claim 10 does not need to be the same identification means included in claim 9 or 19. Likewise, with regard to claim 11, claim 11 does not depend from claim 9 or 19, and, therefore, the optical identifier which is included in claim 11, as amended, does not need to be the same identification means included in claim 9 or 19. Nevertheless, without further addressing the merits of this rejection, to clarify that claim 19 does depend from claim 11, the term "optical identification" has now been amended to the term "optical identifier" in both claims 11 and 19.

Finally, with regard to the Examiner's assertion that claim 14 is ambiguous, the Examiner asserted that claim 14 is ambiguous in reciting "the tertiary analytes being

capable of interacting with and the at least one primary analyte.” This rejection has now become moot by virtue of the present amendments which removes the term “and” from claim 14 and, accordingly, this rejection should be withdrawn.

Rejections under 35 U.S.C 102(b)

In the Office Action of July 2, 2008, the Examiner then rejected claims 1-15, 18, and 19 under 35 U.S.C. §102(b) as being anticipated by Dames (WO 00/16893). In particular, the Examiner asserted that the Dames reference discloses a system that includes micromachined coded labels for use in multiparameter analysis of analytes that comprises microparticle supports (“microlabels”) that are coded. For the reasons set forth below, this rejection is respectfully traversed and should be withdrawn.

The present application is directed towards a system for multiparameter analysis of analytes that comprises insoluble primary and secondary supports, wherein a plurality of primary analytes and secondary analytes are bound to the primary and secondary supports, respectively. Further included in the system of the present application is a measuring means that is arranged in communication with the fluid solution for monitoring interaction between the primary analytes and secondary analytes, and being arranged to detect any binding interaction by detecting the identification means of the supports.

In contrast to the present invention, the Dames reference does not disclose using a population of coded microlabels with different identities against a further population of coded microlabels, also with different identities. For example, in Figure 2 of the Dames

reference, the plurality of microlabels 6 is formed from different sets of microlabels each with a unique biochemical probe associated with it (*see* Dames, page 4, lines 8-12). However, there are no elements in the Dames reference that correspond to the insoluble microparticle secondary supports of claims 1 and 15. In the Dames reference, samples under test 8 are all marked with the same fluorescent labels 9 (*see* page 4, lines 14-17), which are not insoluble microparticle supports. Further, there is no teaching or suggestion of there being more than one type of sample under test 8 and more than one type of corresponding fluorescent label 9.

Thus, the Dames reference only discloses the use of multiplexing with respect to the probes attached to the coded microlabels. There is no multiplexing with respect to the samples under test 8 and these samples are not even bound to insoluble microparticles. Accordingly, Applicants respectfully submit that claims 1-15, 18, and 19 are not anticipated by the Dames reference. Applicants thus submit that the Examiner's rejection on the basis of that reference is respectfully traversed and should be withdrawn.

Rejections under 35 U.S.C 102(e)

In the Office Action, the Examiner further rejected claims 1-15, 18, and 19 under 35 U.S.C. §102(e) as being anticipated Bruchez, et al. (US 2001/0034034). Specifically, the Examiner asserted the Bruchez reference discloses systems for multiparameter analysis of analytes comprising insoluble microparticle primary supports having identification means. Again, for the reasons set forth below, Applicants respectfully traverse the rejection and submit that the rejection should be withdrawn.

Contrary to the Examiner's assertions, the Bruchez reference discloses the use of semiconductor nanocrystals ("Qdots") for detection of multiple targets (*see* Bruchez, paragraph [0109]). However, the Bruchez reference does not disclose using a population of Qdots with different identities (i.e. emission wavelengths) against a further population of Q dots that also have different identities. For example, paragraphs [0247]-[0250] of the cited reference disclose the use, in one assay, of spectrally distinct Qdot-conjugated antibodies reacting with antigens immobilized on microspheres. The microspheres can carry Qdots or organic dyes, but there is no teaching or suggestion that subsets of the microspheres should carry Qdots or dye with different identities or even that there is more than one type of antigen. As such, in systems with two reacting analytes, the Bruchez reference only discloses the use of multiplexing with respect to, at most, one of the analytes. Accordingly, claims 1-15, 18, and 19 are not anticipated by the Bruchez reference and the rejection should be withdrawn.

Rejections under 35 U.S.C 103(a)

In Office Action of July 2, 2008, the Examiner further rejected claim 10 under 35 U.S.C. §103(a) as being unpatentable over the Dames or the Bruchez reference in view of Mandecki (US 6,361,950). In this rejection, the Examiner asserted that while Dames and Bruchez do not disclose an identification means that is a radio frequency identification transponder (RFID), the Mandecki reference discloses solid supports that are associated with an RFID. As such, the Examiner asserted that it would have been obvious to one of ordinary skill in the art to substitute a RFID as taught by Mandecki into the analytical

systems of Dames or Bruchez as an identification means. For the reasons set forth below, this rejection is respectfully traversed and should be withdrawn.

As discussed in detail above, in contrast to Dames and Bruchez, claims 1 and 15 of the present application require the primary supports to have respective identification means which correspond to each primary support's respective primary analyte(s), and the secondary supports to have respective identification means which correspond to each secondary support's respective secondary analyte(s). Accordingly, the present invention, as claimed, relates to the multiplexing of both analytes, a process that is not taught or suggested by Dames or Bruchez, either alone or in combination.

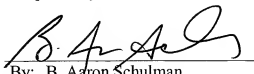
Dames only describes multiplexing in relation to the probes that are attached to the coded microlabels and there is no teaching or suggestion of multiplexing in relation to the samples, which are not even bound to insoluble microparticles. Further, in systems with two reacting analytes, Bruchez only discloses the use of multiplexing with regard to, at most, one of the analytes and there is no teaching or suggestion of multiplexing more than one analyte, as described and claimed in the present application.

The Mandecki reference adds nothing further in this regard. Mandecki was only cited for its teachings with respect to a RFID, and thus, includes no teaching or suggestion with respect to multiplexing more than one analyte. Accordingly, Applicants respectfully submit that the present invention is not rendered obvious by the cited references and that the claims of the present application are clearly patentable over those references. Applicants thus submit that the Examiner's rejection on the basis of those references is respectfully traversed and should be withdrawn.

In light of the amendments and arguments provided herewith, Applicants submit that, upon entrance of the present amendment, the present application will overcome all prior rejections and objections, and will be placed in condition for immediate allowance. Entrance of the amendment and allowance of the application is thus respectfully requested.

Respectfully submitted,

Date: September 2, 2008

A handwritten signature in black ink, appearing to read 'B. Aaron Schulman', is written over a horizontal line.

By: B. Aaron Schulman
Registration No.: 31,877

STITES & HARBISON PLLC • 1199 North Fairfax St • Suite 900 • Alexandria, VA 22314
TEL: 703-739-4900 • FAX: 703-739-9577 • CUSTOMER NO. 000881